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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/630,754
Filing Date: July 31, 2003
Appellant(s): HANSON ET AL.

Andrew M. Calderon
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 2-12-2007 appealing from the Office action mailed 9-11-2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,107,588	De Leo et al.	08-2000
6,274,836	Walach	08-2001

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1 – 20 are rejected under 35 U.S.C. 102(b) as being anticipated by De Leo et al. The reference discloses a plurality of input feeding devices (F_1, F_2) each randomly receiving products from a stream of product; a plurality of output groups corresponding to the plurality of input feeding devices during a first pass phase (U) and a second pass phase (W_a, W_b), the plurality of input feeding devices feeding the product to a plurality of output bins of the plurality of output groups; and a control having a first mode of operation (Fig. 1a) and a second mode of operation (Fig. 1b) for the first pass phase and the second pass phase, respectively, wherein in the first mode, the control allows all input feeding devices of the plurality of input feeding devices complete access to all output groups of the plurality of output groups during the first pass phase (U_i), and in the second mode, the control constrains placement of the products to output groups (W_a, W_b) assigned in the first pass phase such that the groupings of the products to the assigned output groups remain constant between the first pass phase and the second pass phase (col. 3, lines 10+; col. 5, lines 10+).

With regards to claim 2, the reference further discloses the control, in the first mode, allows the products fed from any of the plurality of input feeding devices access to any output group of the plurality of output groups based on a code of the products (col. 3, lines 10+; col. 5, lines 10+).

With regards to claim 3, the reference further discloses the control assigns each input feeding device to an associated particular output group of the plurality of output groups (col. 3, lines 10+; col. 5, lines 10+).

With regards to claim 4, the reference further discloses the products, in the second pass phase, are fed through each of the assigned input device to each of the associated particular output group (col. 3, lines 10+; col. 5, lines 10+).

With regards to claim 5, the reference further discloses each of the assigned output groups has a plurality of output bins such that, in the second pass phase, the products placed in the output bins of the each associated assigned output groups are fed to the each corresponding assigned input feeding device in a sequential order of the output bins in the each assigned output groups (col. 3, lines 10+; col. 5, lines 10+).

With regards to claim 6, the reference further discloses the plurality of input devices is equal to the plurality of output groups (co. 2, lines 25+).

With regards to claim 7, the reference further discloses the control maintains a same grouping of output bins between the first pass phase and the second pass phase (col. 3, lines 10+; col. 5, lines 10+).

With regards to claim 8, the reference further discloses the control constrains each of the input feeding devices, on the second pass phase, to feeding product, received from a previously assigned output group maintained from the first pass phase, to a same output group in the second pass phase (col. 3, lines 10+; col. 5, lines 10+).

With regards to claim 9, the reference further discloses the each output group of the plurality of output groups is designated for a number of routes (col. 3, lines 10+; col. 5, lines 10+).

With regards to claim 10, the reference further discloses the plurality of input feeding devices is at least two input feeding devices (col. 3, lines 10+; col. 5, lines 10+).

With regards to claim 11, the reference further discloses the plurality of input feeding devices is four input feeding devices and the plurality of output groups is equal to a number of the plurality of input feeding devices (col. 3, lines 10+; col. 5, lines 10+).

With regards to claim 12, the reference further discloses the products are mail pieces (col. 3, lines 10+; col. 5, lines 10+).

With regards to claim 13, the reference further discloses a plurality of input feeding devices each randomly receiving products from a stream of product; a plurality of output groups corresponding to the plurality of input feeding devices during a first pass phase and a second pass phase, the plurality of input feeding devices feeding the products to output bins of the plurality of output groups; and a control allowing all input feeding devices of the plurality of input feeding devices complete access to all output groups of the plurality of output groups during the first pass phase and assigning contiguous output bins to predetermined output groups of the plurality of output groups and associating each of the predetermined output groups with respective input feeding devices such that the predetermined output groups remain constant between the first pass phase and the second pass phase (col. 3, lines 10+; col. 5, lines 10+).

With regards to claim 14, the reference further discloses the control constrains placement of the products to the predetermined output groups assigned in the first pass phase during the second pass phase such that the groupings of the products remain constant between the first pass phase and the second pass phase (col. 3, lines 10+; col. 5, lines 10+).

With regards to claim 15, the reference further discloses the products, in the second pass phase, are fed through the respective input feeding devices to the associated predetermined output groups (col. 3, lines 10+; col. 5, lines 10+).

With regards to claim 16, the reference further discloses the products are mail pieces (col. 3, lines 10+; col. 5, lines 10+).

With regards to claim 17, the reference further discloses providing a plurality of product from a stream of product to any of a plurality of input devices; feeding each of the plurality of product, in a first pass phase, to an assigned group of output bins of a plurality of output groups based on a code associated with the each of the product, the plurality of product being fed by the plurality of input devices; and assigning each of the plurality of input devices to each of the assigned group of output bins (col. 3, lines 10+; col. 5, lines 10+).

With regards to claim 18, the reference further discloses the step of constraining placement of the plurality of product during a second pass phase to the assigned group of output bins such that the assigned group of output bins remain constant between the first pass phase and a second pass phase (col. 3, lines 10+; col. 5, lines 10+).

With regards to claim 19, the reference further discloses assigning each of the plurality of input devices to feed product of the plurality of product, during the second sort phase, to each of the assigned group of output bins (col. 3, lines 10+; col. 5, lines 10+).

With regards to claim 20, the reference further discloses the plurality of products are mail pieces (col. 3, lines 10+; col. 5, lines 10+).

Claims 1 – 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Walach. The reference discloses a plurality of input feeding devices (P) each randomly receiving products from a stream of product; a plurality of output groups (N) corresponding to the plurality of input feeding devices during a first pass phase and a second pass phase, the plurality of input feeding devices feeding the product to a plurality of output bins of the plurality of output groups; and a control having a first mode of operation (120) and a second mode of operation (130) for the first pass phase and the second pass phase, respectively, wherein in the first mode, the control allows all input feeding devices of the plurality of input feeding devices complete access to all output groups of the plurality of output groups during the first pass phase, and in the second mode, the control constrains placement of the products to output groups assigned in the first pass phase such that the groupings of the products to the assigned output groups remain constant between the first pass phase and the second pass phase (col. 3, lines 46+; col. 4, lines 10+; col. 5, lines 38+).

With regards to claim 2, the reference further discloses the control, in the first mode, allows the products fed from any of the plurality of input feeding devices access

to any output group of the plurality of output groups based on a code of the products (col. 3, lines 46+; col. 4, lines 10+; col. 5, lines 38+).

With regards to claim 3, the reference further discloses the control assigns each input feeding device to an associated particular output group of the plurality of output groups (col. 3, lines 46+; col. 4, lines 10+; col. 5, lines 38+).

With regards to claim 4, the reference further discloses the products, in the second pass phase, are fed through each of the assigned input device to each of the associated particular output group (col. 3, lines 46+; col. 4, lines 10+; col. 5, lines 38+).

With regards to claim 5, the reference further discloses each of the assigned output groups has a plurality of output bins such that, in the second pass phase, the products placed in the output bins of the each associated assigned output groups are fed to the each corresponding assigned input feeding device in a sequential order of the output bins in the each assigned output groups (col. 3, lines 46+; col. 4, lines 10+; col. 5, lines 38+).

With regards to claim 6, the reference further discloses the plurality of input devices is equal to the plurality of output groups (col. 3, lines 46+; col. 4, lines 10+; col. 5, lines 38+).

With regards to claim 7, the reference further discloses the control maintains a same grouping of output bins between the first pass phase and the second pass phase (col. 3, lines 46+; col. 4, lines 10+; col. 5, lines 38+).

With regards to claim 8, the reference further discloses the control constrains each of the input feeding devices, on the second pass phase, to feeding product,

received from a previously assigned output group maintained from the first pass phase, to a same output group in the second pass phase (col. 3, lines 46+; col. 4, lines 10+; col. 5, lines 38+).

With regards to claim 9, the reference further discloses the each output group of the plurality of output groups is designated for a number of routes (col. 3, lines 46+; col. 4, lines 10+; col. 5, lines 38+).

With regards to claim 10, the reference further discloses the plurality of input feeding devices is at least two input feeding devices (col. 3, lines 46+; col. 4, lines 10+; col. 5, lines 38+).

With regards to claim 11, the reference further discloses the plurality of input feeding devices is four input feeding devices and the plurality of output groups is equal to a number of the plurality of input feeding devices (col. 3, lines 46+; col. 4, lines 10+; col. 5, lines 38+).

With regards to claim 12, the reference further discloses the products are mail pieces (col. 3, lines 46+; col. 4, lines 10+; col. 5, lines 38+).

With regards to claim 13, the reference further discloses a plurality of input feeding devices each randomly receiving products from a stream of product; a plurality of output groups corresponding to the plurality of input feeding devices during a first pass phase and a second pass phase, the plurality of input feeding devices feeding the products to output bins of the plurality of output groups; and a control allowing all input feeding devices of the plurality of input feeding devices complete access to all output groups of the plurality of output groups during the first pass phase and assigning

contiguous output bins to predetermined output groups of the plurality of output groups and associating each of the predetermined output groups with respective input feeding devices such that the predetermined output groups remain constant between the first pass phase and the second pass phase (col. 3, lines 46+; col. 4, lines 10+; col. 5, lines 38+).

With regards to claim 14, the reference further discloses the control constrains placement of the products to the predetermined output groups assigned in the first pass phase during the second pass phase such that the groupings of the products remain constant between the first pass phase and the second pass phase (col. 3, lines 46+; col. 4, lines 10+; col. 5, lines 38+).

With regards to claim 15, the reference further discloses the products, in the second pass phase, are fed through the respective input feeding devices to the associated predetermined output groups (col. 3, lines 46+; col. 4, lines 10+; col. 5, lines 38+).

With regards to claim 16, the reference further discloses the products are mail pieces (col. 3, lines 46+; col. 4, lines 10+; col. 5, lines 38+).

With regards to claim 17, the reference further discloses providing a plurality of product from a stream of product to any of a plurality of input devices; feeding each of the plurality of product, in a first pass phase, to an assigned group of output bins of a plurality of output groups based on a code associated with the each of the product, the plurality of product being fed by the plurality of input devices; and assigning each of the

plurality of input devices to each of the assigned group of output bins (col. 3, lines 46+; col. 4, lines 10+; col. 5, lines 38+).

With regards to claim 18, the reference further discloses the step of constraining placement of the plurality of product during a second pass phase to the assigned group of output bins such that the assigned group of output bins remain constant between the first pass phase and a second pass phase (col. 3, lines 46+; col. 4, lines 10+; col. 5, lines 38+).

With regards to claim 19, the reference further discloses assigning each of the plurality of input devices to feed product of the plurality of product, during the second sort phase, to each of the assigned group of output bins (col. 3, lines 46+; col. 4, lines 10+; col. 5, lines 38+).

With regards to claim 20, the reference further discloses the plurality of products are mail pieces (col. 3, lines 46+; col. 4, lines 10+; col. 5, lines 38+).

The following are claim diagrams for both references.

Claim	Reference cite (De Leo)
1. A system for sequencing products, comprising:	
a plurality of input feeding devices each randomly receiving products from a stream of product;	(F_1, F_2, F_i)
a plurality of output groups corresponding to the plurality of input feeding devices during a first pass phase and a second pass phase, the plurality of input feeding devices feeding the product to a plurality of output bins of the plurality of output groups; and	(U, W_a, W_B)
a control having a first mode of operation and a second mode of operation for the first pass phase and the second pass phase, respectively, wherein	(Fig 1a and Fig 1b)
in the first mode, the control allows all input feeding devices of the plurality of input feeding devices complete access to all output groups of the plurality of output groups during the first pass phase, and	(U_i, c3 lines 10-21)
in the second mode, the control constrains placement of the products to output groups assigned in the first pass phase such that the groupings of the products to the assigned output groups remain constant between the first pass phase and the second pass phase.	(W_a, W_B, and c5 lines 10-26)
2. The system of claim 1, wherein the control, in the first mode, allows the products fed from any of the plurality of input feeding devices access to any output group of the plurality of output groups based on a code of the products.	(c3 lines 10-21)
3. The system of claim 1, wherein the control assigns each input feeding device to an associated particular output group of the plurality of output groups.	(c5 lines 10-26)
4. The system of claim 3, wherein the products, in the second pass phase, are fed through each of the assigned input device to each of the associated particular output group.	(c5 lines 10-26)

5. The system of claim 1, wherein each of the assigned output groups has a plurality of output bins such that, in the second pass phase, the products placed in the output bins of the each associated assigned output groups are fed to the each corresponding assigned input feeding device in a sequential order of the output bins in the each assigned output groups.	(c5 lines 10-26 and figure 1b)
6. The system of claim 1, wherein the plurality of input devices is equal to the plurality of output groups.	(c5 lines 10-26 and figure 1b)
7. The system of claim 1, wherein the control maintains a same grouping of output bins between the first pass phase and the second pass phase.	(c3 lines 10-21, c5 lines 10-26, figures 1a and 1b)
8. The system of claim 1, wherein the control constrains each of the input feeding devices, on the second pass phase, to feeding product, received from a previously assigned output group maintained from the first pass phase, to a same output group in the second pass phase.	(c5 lines 10-26 and figures 1a and 1b)
9. The system of claim 1, wherein the each output group of the plurality of output groups is designated for a number of routes.	(c3 lines 55+ and figure 3)
I0. The system of claim 1, wherein the plurality of input feeding devices is at least two input feeding devices.	(F_1, F_2, and c1 lines 59-63)
11. The system of claim 1, wherein the plurality of input feeding devices is four input feeding devices and the plurality of output groups is equal to a number of the plurality of input feeding devices.	(c1 lines 59-63)
12. The system of claim 1, wherein the products are mail pieces.	(c1 lines 59-63)

13. A system for sequencing products, comprising:

a plurality of input feeding devices each randomly receiving products from a stream of product;

(F_1, F_2, F_i)

a plurality of output groups corresponding to the plurality of input feeding devices during a first pass phase and a second pass phase, the plurality of input feeding devices feeding the products to output bins of the plurality of output groups; and

(U, W_a, W_B)

a control allowing all input feeding devices of the plurality of input feeding devices complete access to all output groups of the plurality of output groups during the first pass phase and assigning contiguous output bins to predetermined output groups of the plurality of output groups and associating each of the predetermined output groups with respective input feeding devices such that the predetermined output groups remain constant between the first pass phase and the second pass phase.

(U_i, c3 lines 10-21, W_a, W_B, and c5 lines 10-26)

14. The system of claim 13, wherein the control constrains placement of the products to the predetermined output groups assigned in the first pass phase during the second pass phase such that the groupings of the products remain constant between the first pass phase and the second pass phase.

(c5 lines 10-26 and fig 1b)

15. The system of claim 13, wherein the products, in the second pass phase, are fed through the respective input feeding devices to the associated predetermined output groups.

(c5 lines 10-26 and fig 1b)

16. The system of claim 13, wherein the products are mail pieces.

(c1 lines 59-63)

17. A method of sequencing product, comprising the steps of:	
providing a plurality of product from a stream of product to any of a plurality of input devices;	(c2 lines 25-43)
feeding each of the plurality of product, in a first pass phase, to an assigned group of output bins of a plurality of output groups based on a code associated with the each of the product, the plurality of product being fed by the plurality of input devices; and	(c3 lines 10-21, c5 lines 10-26, and c2 lines 43-49)
assigning each of the plurality of input devices to each of the assigned group of output bins.	(c3 lines 10-21 and c5 lines 10-26)
18. The method of claim 17, further comprising the step of constraining placement of the plurality of product during a second pass phase to the assigned group of output bins such that the assigned group of output bins remain constant between the first pass phase and a second pass phase.	(c5 lines 10-26)
19. The method of claim 17, further comprising assigning each of the plurality of input devices to feed product of the plurality of product, during the second sort phase, to each of the assigned group of output bins.	(c5 lines 10-26)
20. The method of claim 17, wherein the plurality of products are mail pieces.	(c1 lines 59-63

Claim	Reference cite (Walach)
1. A system for sequencing products, comprising:	
a plurality of input feeding devices each randomly receiving products from a stream of product;	(P, c2 lines 7-8, and c9 lines 33-35)
a plurality of output groups corresponding to the plurality of input feeding devices during a first pass phase and a second pass phase, the plurality of input feeding devices feeding the product to a plurality of output bins of the plurality of output groups; and	(N and c2 lines 21-27)
a control having a first mode of operation and a second mode of operation for the first pass phase and the second pass phase, respectively, wherein	(120, 130)
in the first mode, the control allows all input feeding devices of the plurality of input feeding devices complete access to all output groups of the plurality of output groups during the first pass phase, and	(c3 lines 46-55, c4 lines 10-17, and c5 lines 47-63)
in the second mode, the control constrains placement of the products to output groups assigned in the first pass phase such that the groupings of the products to the assigned output groups remain constant between the first pass phase and the second pass phase.	(c3 lines 46-55, c4 lines 10-17, and c5 lines 47-63)
2. The system of claim 1, wherein the control, in the first mode, allows the products fed from any of the plurality of input feeding devices access to any output group of the plurality of output groups based on a code of the products.	(c3 lines 46-55, c4 lines 10-17, and c5 lines 47-63)
3. The system of claim 1, wherein the control assigns each input feeding device to an associated particular output group of the plurality of output groups.	(c3 lines 46-55, c4 lines 10-17, and c5 lines 47-63)
4. The system of claim 3, wherein the products, in the second pass phase, are fed through each of the assigned input device to each of the associated particular output group.	(c3 lines 46-55, c4 lines 10-17, and c5 lines 47-63)

5. The system of claim 1, wherein each of the assigned output groups has a plurality of output bins such that, in the second pass phase, the products placed in the output bins of the each associated assigned output groups are fed to the each corresponding assigned input feeding device in a sequential order of the output bins in the each assigned output groups.	(c3 lines 46-55, c4 lines 10-17, and c5 lines 47-63)
6. The system of claim 1, wherein the plurality of input devices is equal to the plurality of output groups.	(c3 lines 46-55, c4 lines 10-17, and c5 lines 47-63)
7. The system of claim 1, wherein the control maintains a same grouping of output bins between the first pass phase and the second pass phase.	(c3 lines 46-55, c4 lines 10-17, and c5 lines 47-63)
8. The system of claim 1, wherein the control constrains each of the input feeding devices, on the second pass phase, to feeding product, received from a previously assigned output group maintained from the first pass phase, to a same output group in the second pass phase.	(c3 lines 46-55, c4 lines 10-17, and c5 lines 47-63)
9. The system of claim 1, wherein the each output group of the plurality of output groups is designated for a number of routes.	(c3 lines 46-55, c4 lines 10-17, and c5 lines 47-63)
I0. The system of claim 1, wherein the plurality of input feeding devices is at least two input feeding devices.	(c3 lines 46-55, c4 lines 10-17, and c5 lines 47-63)
11. The system of claim 1, wherein the plurality of input feeding devices is four input feeding devices and the plurality of output groups is equal to a number of the plurality of input feeding devices.	(c3 lines 46-55, Figure 1, P)
12. The system of claim 1, wherein the products are mail pieces.	(c1 lines 5-7)

13. A system for sequencing products, comprising:

a plurality of input feeding devices each randomly receiving products from a stream of product;

(P, c2 lines 7-8, and c9 lines 33-35)

a plurality of output groups corresponding to the plurality of input feeding devices during a first pass phase and a second pass phase, the plurality of input feeding devices feeding the products to output bins of the plurality of output groups; and

(N and c2 lines 21-27)

a control allowing all input feeding devices of the plurality of input feeding devices complete access to all output groups of the plurality of output groups during the first pass phase and assigning contiguous output bins to predetermined output groups of the plurality of output groups and associating each of the predetermined output groups with respective input feeding devices such that the predetermined output groups remain constant between the first pass phase and the second pass phase.

(c3 lines 46-55, c4 lines 10-17, and c5 lines 47-63)

14. The system of claim 13, wherein the control constrains placement of the products to the predetermined output groups assigned in the first pass phase during the second pass phase such that the groupings of the products remain constant between the first pass phase and the second pass phase.

(c3 lines 46-55, c4 lines 10-17, and c5 lines 47-63)

15. The system of claim 13, wherein the products, in the second pass phase, are fed through the respective input feeding devices to the associated predetermined output groups.

(c3 lines 46-55, c4 lines 10-17, and c5 lines 47-63)

16. The system of claim 13, wherein the products are mail pieces.

(c1 lines 5-7)

17. A method of sequencing product, comprising the steps of:	
providing a plurality of product from a stream of product to any of a plurality of input devices;	(P, c2 lines 7-8, and c9 lines 33-35)
feeding each of the plurality of product, in a first pass phase, to an assigned group of output bins of a plurality of output groups based on a code associated with the each of the product, the plurality of product being fed by the plurality of input devices; and	(c3 lines 46-55, c4 lines 10-17, and c5 lines 47-63)
assigning each of the plurality of input devices to each of the assigned group of output bins.	(c3 lines 46-55, c4 lines 10-17, and c5 lines 47-63)
18. The method of claim 17, further comprising the step of constraining placement of the plurality of product during a second pass phase to the assigned group of output bins such that the assigned group of output bins remain constant between the first pass phase and a second pass phase.	(c3 lines 46-55, c4 lines 10-17, and c5 lines 47-63)
19. The method of claim 17, further comprising assigning each of the plurality of input devices to feed product of the plurality of product, during the second sort phase, to each of the assigned group of output bins.	(c3 lines 46-55, c4 lines 10-17, and c5 lines 47-63)
20. The method of claim 17, wherein the plurality of products are mail pieces.	(c1 lines 5-7)

(10) Response to Argument

(A) Claims 1-20 rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,107,288 issued to De Leo et al ("De Leo").

Claims 1-6 and 9-12 rejected under 35 U.S.C. §102(b) in view of De Leo:

The rejection of claims 1-6 and 9-12 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,107,288 issued to De Leo et al. is proper and should be affirmed.

Appellant begins with a summary of the invention providing an example wherein each output group contains 90 bins. Examiner contends that while the example is indicative of the disclosure it provides greater detail and is more limiting than the claim language. This position is highlighted below relative to the appellant's specific statements regarding the De Leo reference

Appellant states:

> "However, Appellants submit that De Leo does not disclose that the control constrains placement of the products to output groups assigned in the first pass phase such that the groupings of the products to the assigned output groups remain constant between the first pass phase and the second pass phase. That is, in De Leo, the assigned output groups of output bins do not remain constant between the first pass and second pass, as required by claim 1. This is clearly shown by comparison of FIGS. Ia and Ib of De Leo. For example, in the first pass, item R_{1b} is placed in output bin U_2, as is shown in FIG. Ia. Then in the second pass, this same item R_{1b} is placed in an output bin of group Wb, as shown in FIG. Ib. However, as is clearly seen in FIGS. Ia and Ib, output bin U_2 is not in group Wb. Put another way, item R_{1b} is not placed in the same group of output bins in the first pass phase and in the second pass phase. Thus, the assigned groups of output bins do not remain constant between the first pass and second pass."

Examiner disagrees and maintains that De Leo does show the claimed limitations. At column 3 lines 10-21 De Leo discusses the first sorting pass in which "each of the N outputs can potentially receive objects coming from both the input A and the input B." Figure 1a and column 3 lines 65+ disclose that during the first pass objects are sorted according to "order progression POP along a respective subsection." Column 4 lines 66+ states, "there are thus formed two collections Ca and Cb of groups of postal objects: the collection Ca relating to the subroute Pa and containing groups of postal objects subdivided by delivery positions along the subsections Si...." Therefore during the first pass sort output groups A and B are assigned. At column 5 lines 10-26 De Leo discusses the second sorting pass in which each feeder is dedicated to a specific collection and feeds only to a subset (Wa or Wb) of the N outputs. Therefore during the second pass there are output groups (Wa and Wb or Ca and Cb) that remain constant between the first pass phase and second pass phase. Figures 1a and 1b along with the disclosure of De Leo show that after both the first and second pass sorts each bin Ui contains only A or B items therefore these groupings remain constant.

Appellant also pointed out that, "item R_{ib} is placed in output bin U_2, as is shown in FIG. Ia. Then in the second pass, this same item R_{1b} is placed in an output bin of group Wb, as shown in FIG. Ib. However, as is clearly seen in FIGS. Ia and Ib, output bin U_2 is not in group Wb. Put another way, item Rib is not placed in the same group of output bins in the first pass phase and in the second pass phase." Examiner agrees that item R_{1b} is placed in bin U_2 during the first pass sort and then into a different bin in the second pass sort. Appellant is arguing the assignment of the physical bin locations to

specific output groups. Examiner contends that the claim does not require this level of continuity. The claim only requires a plurality of output bins. The rest of the claim is directed to "output groups" and the claim requires "....such that the grouping of the products to the assigned output groups remain constant between the first pass phase and the second pass phase." There is nothing that requires the physical bin assignments remain constant or that precludes reassignment or reorganization of the physical bin locations between phases. Therefore De Leo anticipates the claims in question as during the first phase groups are established (Ca and Cb) and during the second phase the groups are maintained.

Following the reproduction of figures 1a and 1b appellant further states, "That is, item R_{1b} is not constrained to the same groups of output bins between the first pass and second pass." Examiner again contends that the claims do not require "groups of output bins" but rather output groups and therefore the continuity of A and B items as collections Ca and Cb disclosed by De Leo possess all the claimed limitations.

Claim 7 rejected under 35 U.S.C. §102(b) in view of De Leo:

The rejection of claim 7 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,107,288 issued to De Leo et al. is proper and should be affirmed.

Appellant states,

> "De Leo does not disclose these features. As discussed above with respect to claim 1, De Leo does not disclose that the control constrains placement of the products to output groups assigned in the first pass phase such that the groupings of the products to the assigned output groups remain constant between the first pass phase and the second pass phase. To the contrary, De

> Leo explicitly shows an item (R_{1b}) placed in an output bin of group Wb in the second pass phase, after being placed in a bin (U_2) not in group Wb in the first pass phase. Therefore, De Leo does not show that the control maintains a same grouping of output bins between the first pass phase and the second pass phase, and fails to disclose each and every feature of claim 7."

Similar to claim 1 Examiner maintains that the neither claims 1 nor 7 actually require continuity in bin assignments of the physical bin locations. Examiner maintains that the continuity of collections Ca and Cb such that a given bin only contains A or B items after both the first and second passes anticipates the claims. Examiner agrees that item R_{1b} is placed in bin U_2 during the first pass sort and then into a different bin in the second pass sort. Appellant is arguing the assignment of the physical bin locations to specific output groups. Examiner contends that the claim does not require this level of continuity. Claim 7 still only requires "a same grouping of output bins between the first pass phase and the second pass phase." Examiner contends that this does not positively link the output groups to the output bins. Examiner contends that the mere fact the machine feeds the products to the same output bin locations in both the first and second pass is sufficient to anticipate claim 7 regardless of which products are directed to specific bins.

Claim 8 rejected under 35 U.S.C. §102(b) in view of De Leo:

The rejection of claim 8 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,107,288 issued to De Leo et al. is proper and should be affirmed.

Appellant states,

"Claim 8 depends from allowable independent claim 1, and additionally recites

> that the control constrains each of the input feeding devices, on the second pass phase, to feeding product, received from a previously assigned output group maintained from the first pass phase, to a same output group in the second pass phase. De Leo does not disclose these features."

Examiner disagrees and maintains that De Leo does disclose, "that the control constrains each of the input feeding devices, on the second pass phase, to feeding product, received from a previously assigned output group maintained from the first pass phase, to a same output group in the second pass phase." Specifically at column 5 lines 10-26 De Leo discusses the second pass and discloses that "each postal object 7 supplied to the first input A (Fig. 1b) can only be directed towards a first subset Wa of the N outputs." Therefore collections Ca and Cb are established during the first pass (c4 lines 66+) and are maintained during the second pass. Regarding appellants discussion of figures 1a and 1b relative to item R_{1b}, examiner still maintains that the claims do not require the level of continuity being argued as discussed previously.

Claims 13, 15 and 16 rejected under 35 U.S.C. §102(b) in view of De Leo:

The rejection of claims 13, 15, and 16 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,107,288 issued to De Leo et al. is proper and should be affirmed.

Appellant states, "De Leo does not disclose that the output groups remain constant between the first pass phase and the second pass phase." Examiner disagrees and contends that the output groups are generally A and B and that the segregation of A items from B items is maintained throughout both passes.

Appellant further states,

> "That is, the Examiner has not adequately explained how or where De Leo discloses a controller assigning contiguous output bins to predetermined output groups of the plurality of output groups and associating each of the predetermined output groups with respective input feeding devices such that the predetermined output groups remain constant between the first pass phase and the second pass phase, as recited in claim 13. Put another way, the Examiner has not identified output groups of contiguous output bins during the first pass phase in De Leo."

Examiner reiterates that collections Ca and Cb are established during the first pass in De Leo. Furthermore during the first pass each bin only contains A items or B items. During the second pass bins still only contain A items or B items therefore examiner asserts that contiguous output bins are established and remain constant during both passes as the groupings of the items remains constant. Examiner does not understand how there can be contiguous output bins in a single pass as argued by the appellant as the examiner understands this language to be in reference to the continuity from the first pass to the second pass.

Claim 14 rejected under 35 U.S.C. §102(b) in view of De Leo:

The rejection of claim 14 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,107,288 issued to De Leo et al. is proper and should be affirmed.

Appellant states, "De Leo does not disclose that the predetermined output groups remain constant between the first pass phase and the second pass phase." Examiner disagrees and maintains that De Leo does disclose that the predetermined output groups remain constant between the first pass phase and the second pass phase in that A and B items are segregated throughout both passes. Examiner acknowledges

appellants discussion of figures 1a and 1b relative to item R_{1b}, but examiner maintains that the claims do not require the level of continuity being argued as discussed previously.

Claims 17, 19 , and 20 rejected under 35 U.S.C. §102(b) in view of De Leo:

The rejection of claims 17, 19 , and 20 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,107,288 issued to De Leo et al. is proper and should be affirmed.

Appellant states,

> "De Leo does not disclose feeding each of the plurality of product, in a first pass phase, to an assigned group of output bins and assigning each of the plurality of input devices to each of the assigned group of output bins. Claim 17 requires that the input feeding devices are assigned to groups used during the first pass. De Leo does not disclose groups of bins used during the first pass phase that are assigned to the input feeding devices. Instead, De Leo discloses assigning input feeding device F1 to output group Wa and input feeding device F2 to output group Wb. However, groups Wa, Wb are not present or used during the first pass phase. As such, the assigning of the input feeding devices to these groups Wa, Wb does not constitute the combination of features recited in claim 17."

Examiner disagrees and maintains that there is an assigned output groups in both the first and second passes. In the first pass there are bins that only receive A items and only receive B items. In the second pass there are also bins that only receive A items or only receive B items. Therefore there are output bins in both passes associated with either A items or B items and these groupings remain constant from the first pass to the second pass. The fact that the bins may be reassigned to establish groups Wa and Wb does not matter. There are bins in both passes receiving only one type of product (A or B) and therefore De Leo anticipates the claim. De Leo establishes

groups Ca and Cb during the first pass and maintains these groups (by feeding them selectively to segregated output groups Wa and Wb) during the second pass. The fact that Wa and Wb are not established until the second pass does not prevent anticipation as there are still A and B groupings in both passes.

Claim 18 rejected under 35 U.S.C. §102(b) in view of De Leo:

The rejection of claim 18 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,107,288 issued to De Leo et al. is proper and should be affirmed.

Appellant states, "Therefore, De Leo does not disclose constraining placement of the plurality of product during a second pass phase to the assigned group of output bins such that the assigned group of output bins remain constant between the first pass phase and a second pass phase, and fails to disclose each and every feature of claim 18." Examiner disagrees and maintains that De Leo anticipates the claim due to the continuity of A and B items from the first to the second pass. Examiner maintains that the assignment of bins to either A or B items is sufficient to anticipate the claim. Examiner is of the position that the claim still does not require that the same physical bin locations remain constant between the first and second pass. De Leo discloses bins are assigned to receive a single product type in either sorting pass.

(B) Claims 1-20 rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,274,836 issued to Walach ("Walach")

Claims 1-10 and 12 rejected under 35 U.S.C. §102(b) in view of Walach:

The rejection of claims 1-10 and 12 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,107,288 issued to Walach is proper and should be affirmed.

Appellant states, "Walach does not disclose these features," in reference to a plurality of input devices each randomly receiving products from a stream of product. Appellant goes on to state,

> "Walach also discloses that, before the first pass, the articles are divided approximately equally between the two input bins (col. 7, lines 8-9). As such, Walach does not disclose a plurality of input feeding devices each randomly receiving products from a stream of product. That is, Walach does not disclose a stream of product, much less that the input bins P randomly receive products from a stream of product. Instead, Walach discloses that before the first pass, the articles are divided approximately equally between the two input bins (col. 7, lines 8-9). Appellants submit that the division of product equally between the two input bins teaches away from a plurality of input feeding devices randomly receiving product from a stream of product. In fact, Appellants submit that, by definition, if the product is equally distributed, then it cannot be randomly assigned to the input feeding devices."

Examiner contends that Walach does disclose a stream of product. At column 9 lines 33-35 Walach discloses, "providing a multiplicity of articles to be sorted..." Examiner contends that the articles to be sorted are being moved from one place to another through out the entire process and therefore there is "a stream of product" as it is moved throughout the sorting process. Regarding the appellant's position, "that the division of product equally between the two input bins teaches away from a plurality of input feeding devices randomly receiving product from a stream of product," examiner disagrees. Examiner contends that the articles are in no particular order prior to the first pass sort and that simply splitting a random pile of articles approximately in half creates

two piles that are still random. Therefore the splitting action does not prevent the articles from, "being randomly assigned to the input feeding devices."

Claim 11 rejected under 35 U.S.C. §102(b) in view of Walach:

The rejection of claim 11 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,107,288 issued to Walach is proper and should be affirmed.

Appellant states, "Walach does not disclose four input feeding devices. Instead Walach discloses a system with two input bins (column 7, lines 3-4), and another system with three input bins (column 9, line 1). Walach does not, however, disclose four input bins." Examiner disagrees and contends that the disclosures referred to by the applicant are non-limiting examples provided for understanding. Walach discloses a plurality of input bins P (c5 lines 40+). Walach also states, "the multi-bin article sorter may be similar to the prior art sorter shown in FIG 1" (c5 lines 37+) . Figure 1 also shows P input bins where P can be any number and is not limited to 2 or 3.

Claim 13-16 rejected under 35 U.S.C. §102(b) in view of Walach:

The rejection of claims 13-16 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,107,288 issued to Walach is proper and should be affirmed.

Appellant states,

> "Independent claim 13 recites, amongst other features, a plurality of input feeding devices each randomly receiving products from a stream of product. Appellants submit that Walach does not disclose these features, and, therefore, does not anticipate the claimed invention... Walach does not disclose a plurality of input feeding devices each randomly receiving products from a stream of product. Instead, Walach discloses that before the first pass, the articles are divided

> approximately equally between the two input bins (col. 7, lines 8-9). Appellants submit, however, that this does not constitute a plurality of input feeding devices each randomly receiving products from a stream of product, as recited and described in the instant application. In fact, Appellants submit that, by definition, if the product is equally distributed, then it cannot be randomly assigned to the input feeding devices."

Examiner reiterates that Walach does disclose a stream of product. At column 9 lines 33-35 Walach discloses, "providing a multiplicity of articles to be sorted..." Examiner contends that the articles to be sorted are being moved from one place to another through out the entire process and therefore there is "a stream of product" as it is moved throughout the sorting process. Regarding the appellant's position, "that, by definition, if the product is equally distributed, then it cannot be randomly assigned to the input feeding devices," examiner disagrees. Examiner contends that the articles are in no particular order prior to the first pass sort and that simply splitting a random pile of articles approximately in half creates two piles that are still random. Therefore the splitting action does not prevent the articles from, "being randomly assigned to the input feeding devices."

Claim 17-20 rejected under 35 U.S.C. §102(b) in view of Walach:

The rejection of claims 17-20 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,107,288 issued to Walach is proper and should be affirmed.

Appellant states, "Independent claim 17 recites, amongst other features, providing a plurality of product from a stream of product to any of a plurality of input devices. Appellants submit that Walach does not disclose these features, and, therefore, does not anticipate the claimed invention." Examiner reiterates that Walach

does disclose a stream of product. At column 9 lines 33-35 Walach discloses, "providing a multiplicity of articles to be sorted..." Examiner contends that the articles to be sorted are being moved from one place to another through out the entire process and therefore there is "a stream of product" as it is moved throughout the sorting process. Appellant further states, "Walach does not, however, disclose a stream of product, much less that products from a stream of product can be provided to any of a plurality of input devices." Examiner disagrees and contends that the articles are divided between the two input bins by an operator and therefore there is nothing that precludes any product from being fed into any of the input devices.

(C) Conclusion

Examiner maintains that the rejections of claims 1-20 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,107,288 issued to De Leo et al and U.S. Patent No. 6,107,288 issued to Walach are proper and should be affirmed.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Mark Hageman

Conferees:

Meredith Petravick

Patrick Mackey

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